

Rocks ▪ *Guided Reading and Study*

Igneous Rocks

This section describes the characteristics and uses of igneous rocks.

Use Target Reading Skills

As you read about igneous rocks, fill in the detail boxes that explain the main idea in the graphic organizer below.

Main Idea		
Igneous rocks are classified by origin, texture, and composition.		
Detail	Detail	Detail
a. 	b. 	c.

Classifying Igneous Rocks

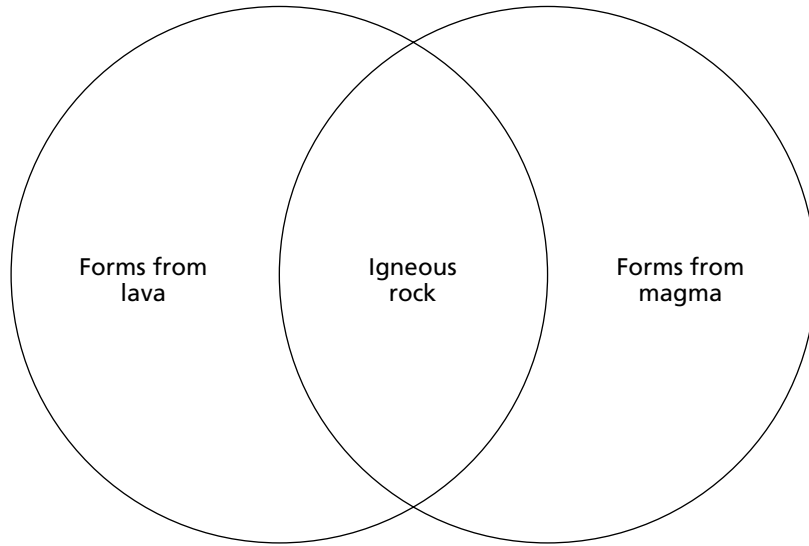
- Circle the letter of the definition of igneous rock.
 - Rock that forms from minerals
 - Rock that contains iron
 - Rock that forms from magma or lava
 - Rock that contains crystals

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Igneous Rocks *(continued)*

2. Complete the Venn diagram by labeling each circle with the type of rock it represents.

a. _____ b. _____



- c. Use the Venn diagram to explain how the types of rocks shown are alike and different. _____
3. Is the following sentence true or false? Extrusive rock forms beneath Earth's surface. _____
4. Circle the letter of each sentence that is true about basalt.
- a. It forms oceanic crust.
 - b. It is the most common intrusive rock.
 - c. It forms from lava.
 - d. It forms beneath Earth's surface.
5. Circle the letter of each sentence that is true about granite.
- a. It is the most abundant intrusive rock in continental crust.
 - b. It forms the core of many mountain ranges.
 - c. It forms from magma.
 - d. It forms on top of the crust.
6. The texture of an igneous rock depends on the size and shape of its _____.

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7. Is the following sentence true or false? Igneous rocks with similar mineral compositions always have the same textures.

Match the type of texture of igneous rocks with how rocks of that texture form.

Type of Texture

How Rocks of That Texture Form

_____ 8. fine-grained

a. Magma cools in two stages.

_____ 9. coarse-grained

b. Lava cools rapidly.

_____ 10. porphyry rock

c. Magma cools slowly.

11. Is the following sentence true or false? Intrusive rocks have smaller crystals than extrusive rocks. _____

12. A rock with large crystals surrounded by small crystals is called _____.

13. What type of texture do extrusive rocks such as basalt have?

14. What is obsidian? _____

15. Describe the texture of obsidian. _____

16. Circle the letter of each sentence that is true about the silica composition of igneous rocks.

- a. Igneous rocks low in silica are usually dark-colored.
- b. An example of an igneous rock low in silica is granite.
- c. Igneous rocks high in silica are usually light-colored.
- d. An example of an igneous rock high in silica is basalt.

17. Describe the different minerals that determine the color of granite.

18. How do geologists determine the mineral composition of granite?

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Igneous Rocks *(continued)*

Uses of Igneous Rocks

19. Why have people throughout history used igneous rocks for tools and building materials? _____

20. Describe three ways granite has been used throughout history.

a. _____

b. _____

c. _____

21. Complete the table that shows the ways igneous rocks are used.

How Some Igneous Rocks Are Used	
Type of Igneous Rock	Way It Is Used
Basalt	Gravel for construction
a.	Cleaning and polishing
b.	Soil mixes

c. Use the information in the table to draw a conclusion about the uses of igneous rocks. You may use more than one sentence.
